STRUCTURAL PIPES

Building the future piece by piece
pipes for monopiles, transition pieces, jacket constructions or piles, EEW offers additional services like coating or the fitting of secondary steel. A special feature is our Point-to-Point Construction Service which provides our clients with pre-fabricated and ready-for-assembly piping components.

With more than 2,100 employees, nine production sites worldwide and a yearly production capacity of approx. 900,000 tonnes the EEW Group is one of the world’s leading specialists in the production of LSAW pipes.
During the renewable energy boom at the start of the 21st century, the wind energy industry was brought into offshore areas. EEW recognised this trend early and developed itself into a pioneer in the production of pipes for offshore wind foundations. As a strong partner for the industry, EEW has already participated in the first German research projects like Alpha Ventus.

Due to continuous investments in technology and human resources, we can manufacture almost all types of foundations in accordance with our customers’ requirements. EEW manufactures monopiles, transition pieces and pre-fabricated components for jacket constructions.
The newest development in our product portfolio for the offshore wind industry is the manufacturing of XL Monopiles. Through extensive investments in special production halls and facilities in our Rostock plant, we are in the position to manufacture monopiles with diameters of up to 10 m (394”) and piece weights of up to 1,500 tonnes.

So-called XL Monopiles are considered to be the most reasonable solution for the foundation of offshore wind farms with higher turbine power in deeper waters.

Besides monopiles, jacket constructions are another state-of-the-art foundation type for offshore wind turbines. Having more than 40 years experience in the fabrication of structural pipes and pipe components for offshore foundations, we can contribute with technical support and perfect project management skills. Our worldwide network of production facilities enables us to deliver serial production of jacket components for large scale projects. Based on our extensive expertise, we are able to provide you with pipe components for all types of jacket foundations whether 3-leg or 4-leg designs, pre-piled, post-piled or suction buckets.

**XL MONOPILES**

More metres today – more power tomorrow

The newest development in our product portfolio for the offshore wind industry is the manufacturing of XL Monopiles. Through extensive investments in special production halls and facilities in our Rostock plant, we are in the position to manufacture monopiles with diameters of up to 10 m (394”) and piece weights of up to 1,500 tonnes.

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**JACKET COMPONENTS**

Serial production of structural pipes for offshore foundations

Besides monopiles, jacket constructions are another state-of-the-art foundation type for offshore wind turbines. Having more than 40 years experience in the fabrication of structural pipes and pipe components for offshore foundations, we can contribute with technical support and perfect project management skills. Our worldwide network of production facilities enables us to deliver serial production of jacket components for large scale projects. Based on our extensive expertise, we are able to provide you with pipe components for all types of jacket foundations whether 3-leg or 4-leg designs, pre-piled, post-piled or suction buckets.
The production of pipes for the offshore oil and gas industry is the traditional strength of EEW. Since the foundation in 1936, EEW has constantly grown in this business.

With regard to our extensive experience in the production of steel pipes, we are able to fulfil our customers’ highest requirements. Apart from standard steel grades used in conventional jacket constructions, the fabrication of high-strength steels for racks and chords for jack-up rigs or low-temperature steels for the use in arctic environments is our daily business.

As a special service for customers in the construction branch, we offer our Point-to-Point Construction Service.

Jacket structure
Selection of jacket components produced by EEW (not exclusive)
A MATTER OF EXPERTISE

Special products for our offshore customers

Tension legs

As the offshore oil and gas industry is constantly moving into deeper waters in order to tap into new sources, so-called tension legs present an adequate alternative to conventional jacket foundations. Tendon pipes must offer great resistance to fatigue and collapse.

Therefore, they are subjected to the highest demands with regard to primary materials, calibration and welding. With more than 80 years of experience in the production of steel pipes, EEW is in the position to fulfill these strict quality requirements.

Jack-up rigs

A speciality in our production programme is the production of fully assembled legs for jack-up rigs.

The raw material is based on high-strength steel (e.g. plates acc. to ABS EQ70, DNV NV-F 690 or ASTM A514 – A517 mod.) sourced from leading plate mills.

CIVIL CONSTRUCTION

For impressive lasting moments

Besides the offshore oil/gas and the offshore wind industry, our LSAW steel pipes are often used in civil constructions like stadiums, bridges or buildings. Also in this business segment our Point-to-Point Construction Service (page 12 – 13) is a well established and favourable solution.

Long radius cold formed/curved SAW pipes with 900 mm outside diameter and wall thicknesses up to 50 mm with severe tolerance requirements have been manufactured by EEW.

More than 700 tonnes of structural SAW pipes have been produced for the world’s tallest building.
Our Point-to-Point Construction Service involves the pre-fabrication of piping components from detailed engineering and pipe production to the organisation of transport. At an early stage, EEW starts the pre-project planning in close collaboration with the customer. By detailed engineering, the optimal piping solutions are mutually identified. When pipe production starts, the key activity of our Point-to-Point Construction Service – the fabrication of ready for assembly piping components – is applied.

Apart from single pipe lengths, construction components with the following full or single services can be supplied:

- Cutting to fix length, bevelling and tapering
- Circumferential welding
- Production and assembly of attachments like cones, shim plates or ring stiffeners
- Weld beads (shear keys)
- End profiling

EEW is able to:

- Perform all kinds of end cutting, like profile cuts with weld edge preparation
- Cut nozzle openings with weld edge preparation
- Perform a wide range of contours, e.g. square, rectangular or oval
- In dimensions up to 6,000 mm diameter
- Detailed engineering
- Generation of BOM’s (Bill of Materials) based on 3D-drawings

With today’s rapid changes in market demands and challenges in pricing, flexibility is a crucial factor. EEW’s Point-to-Point Construction Service enables you to get one step ahead of the competition by a significant improvement of:

Cost efficiency & schedule

- Reduced lead time in fabrication
- Enabling simultaneous construction work
- No interferences in the yard
- Minimal wastage

Quality

- Controlled production conditions
- Defined procedures and repetitive processes
- Highly skilled staff

Safety & environment

- Elimination of weather conditions
- Reduction of work at elevated heights
- Reduction of wastage and transport
In close collaboration with our partners we can provide automated TSA (Thermal Sprayed Aluminium) coating for monopiles. The specific corrosion protection mode of TSA and its favorable ‘self-healing’ long-term behavior due to chemical reaction allows to omit additional cathodic anodes. This leads to cost-effectiveness and environmental benefits.

Various techniques of corrosion protection can be carried out according to all well-known standards e.g. NORSOK M-501.

Besides our primary steel products EEW is able to offer a complete range of secondary steel such as platforms, ladders, anodes or boat landing systems.

As a special service for our customers, we provide full logistical concepts and supply chain management for storage, transportation and load out (RoRo, floating and crane concepts) on request.

The direct access to the quay at our mill in Rostock, Germany, enables easy transportation on barges or vessels to the offshore locations. EEW has 194.0 metres of quay available; the water depth at the pier is 9.5 m and 14.5 m in the harbour basin. Vessels with a length of 140 m can be moored alongside our pier without any difficulties. Stevedoring is processed 24/7.
In close cooperation with our customers and partners, we develop individual supply chain concepts. These concepts do not only include the fabrication of complete offshore components in ready-to-install condition but also full logistical support inclusive load out and sea fastening.

**Mobile production**
Being close to our customers and their projects – for EEW, this is more than just a promise, it is a pledge. With our unique production network consisting of nine strategically well-located pipe mills, we are ideally prepared to serve the offshore industry worldwide. Additionally, EEW has mobile production facilities available, which can be installed in a short period of time to enable the final assembly of pipe components everywhere our customers wish.

**Project management**
Our top performance in production, our flexibility as well as our ability to adhere to delivery appointments and budgets are united in our technical and commercial project management. We have developed excellent skills in project management and established standardised processes in order to handle large scale projects.

**TAILOR MADE SUPPLY CHAIN CONCEPTS**

Creating win-win situations

In close cooperation with our customers and partners, we develop individual supply chain concepts. These concepts do not only include the fabrication of complete offshore components in ready-to-install condition but also full logistical support inclusive load out and sea fastening.

**Beatrice offshore wind farm**
Producing 77,000 MT of pipes for 84 jackets and 208 pin piles is a comprehensive task, but coordinating six EEW mills, four customers as well as 256 deliveries to ten destinations means a real challenge. Being a role model of perfect collaboration in the offshore wind industry, the Beatrice project impressively demonstrates our ability as well as our willingness to adapt to customer's individual requirements as well as our flexibility in developing customised technical and commercial solutions.

- Beatrice offshore wind farm
- Producing 77,000 MT of pipes for 84 jackets and 208 pin piles is a comprehensive task, but coordinating six EEW mills, four customers as well as 256 deliveries to ten destinations means a real challenge. Being a role model of perfect collaboration in the offshore wind industry, the Beatrice project impressively demonstrates our ability as well as our willingness to adapt to customer's individual requirements as well as our flexibility in developing customised technical and commercial solutions.

**4 customers**
**10 delivery destinations**
**6 countries**

**6 EEW mills**
**7,432 no. of items**
**256 deliveries**

**77,000 MT**
**total tonnage**

**Mobile production & logistics hub**

**4 customers**
**10 delivery destinations**
**6 countries**

**6 EEW mills**
**7,432 no. of items**
**256 deliveries**

**Mobile production & logistics hub**
PRODUCTION PROGRAMME

Because variety counts

The yearly capacity of all pipe mills within the EEW Group exceeds 900,000 tonnes. This is based on our know-how in welding technology, state-of-the-art machinery and stable processes. Due to the employment of high-performance welding techniques we ensure a constant high quality of our products.

The traditional EEW strength is the production of SAW pipes. Within the EEW Group a worldwide unique combination of dimensions from 406 mm (16”) to 10,000 mm (394”) outside diameter with wall thicknesses up to 300 mm and length/weight up to 120 m/1,500 tonnes and nearly all material grades can be manufactured.

EEW is able to offer the world’s largest production programme for LSAW pipes.

CERTIFICATES

A matter of trust

High quality and reliability have top priority at EEW. We make no compromise where material, workmanship and quality control are concerned.

‘Why we rely on EEW? Because I can always count on personal service and perfect solutions.’

Ricardo Carver, Tendon Lead Engineer, Total
We are aware of our responsibility for the community, the environment and the health and safety of our more than 2,100 employees worldwide. That’s why we are convinced that HSE is an essential aspect of a successful project delivery as well as a necessary part of a strongly-integrated group management. Through regular self-evaluation, assessments of learning process and training programmes, we always improve our HSE performance.

As part of our HSE policy we are not only working together within the EEW Group in the field of HSE, but also with our customers, subcontractors and third parties. It is the combination of individual strengths and team spirit that brings us closer to our aim of ‘zero work-related injuries/illnesses’.

It is our own approach to ensure that our international activities conform to the required laws and regulations as well as to the expectations of our customers and community.

We have established an integrated management system within the EEW Group containing the internationally recognised certifications in accordance with ISO 9001, OHSAS 18001, ISO 14001 and ISO 50001.

As an ‘ethical compass’, our code of conduct defines guidelines for behaviour in the daily business life of our employees worldwide.

‘No accident is acceptable and all injuries can be prevented.’

Christoph Schorge, Managing Director, EEW Group
## REFERENCES

Decades of experience you can rely on

The following page shows an extract of our references. Complete reference list can be received on request.

### Offshore Wind

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<thead>
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### Offshore Oil & Gas

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